

# USER'S REFERENCE

**AFW-4300**  
**400 MBPS FIREWIRE HOST BUS ADAPTER**

# AFW-4300

## User's Reference

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# Introduction

The Adaptec AFW-4300 Host Adapter (or AFW-4300) is a PCI interface board that can enable your Personal Computer with IEEE-1394 functions. With the AFW-4300, you can connect Digital Video (DV) camcorders or other devices with a 1394 digital interface to any PC compatible or Power Macintosh® computer with PCI expansion slots.

The AFW-4300 features include:

- IEEE-1394-compliance
- Up to 400 Megabits per second (Mbps) transfer rate
- Three external connectors
- Open architecture API (OHCI Compliant)
- Compatibility assurance

To install your AFW-4300, see the *AFW-4300 Installation Guide* included in your kit.

# System Requirements

The minimum system requirements for the AFW-4300 are:

## PC Compatible

- IBM-compatible PC, 266 MHz Processor or above
- Microsoft Windows® 98 Second Edition, Microsoft Windows 2000®, or Windows ME®
- Available PCI slot
- CD-ROM or DVD-ROM drive

## Macintosh

- Mac OS 8.6 or higher
- Apple PowerMac 8600/9600 or later
- Apple FireWire® 2.4 drivers or later
- Available PCI slot
- CD-ROM or DVD-ROM drive

## Additional Requirements for Video Editing and Capturing

- 64 MB RAM (128 MB recommended)
- 50 MB of available hard drive space for program files and digital audio/video content



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**Note:** DV uses 250 MB per minute of capture.

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- DV camcorder or other device equipped with 1394 interface

### For Windows

- 266 MHz Processor or equivalent (350 MHz recommended)
- Monitor that supports 1024 x 768 resolution at 16-bit color mode
- 16-bit stereo sound card with speakers
- Video card with 4 MB RAM

### For Macintosh

- 350 MHz G3 processor or better (G4 recommended)



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**Note:** For non-G3/G4 PowerPC's, full-frame, full motion video might not be possible.

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- Digital video editing software such as Apple iMovie, Adobe Premiere, EditDV Unplugged, or Apple Final Cut Pro

# Contents of Box

The contents in this kit are:

- Adaptec AFW-4300 Host Adapter
- 6-to-4 pin FireWire cable
- AFW-4300 *Hardware Installation Guide*
- FireConnect 4300 CD containing:
  - *MGI VideoWave 4* DV editing software for Windows
  - Links to latest Macintosh FireWire software and drivers
  - Warranty Information
  - Software License Agreement



# About DV Technology

DV technology is a standard digital file and compression format for recording video and audio data onto a digital tape. DV uses compression to reduce the enormous size of the uncompressed video data (much like processing 30 full-screen bitmap images every second) to file sizes manageable by desktop computers.

DV digitizes and compresses video in the camera before the video is recorded to tape and transfers the data directly to a hard drive through the digital 1394 interface. In so doing, DV avoids having to use analog conversion processes that can degrade video quality.

By avoiding analog conversion processes, DV maintains a much higher level of clarity and picture quality at far lower data transfer rates than is possible with customary analog video digitizing cards.

# About 1394 Technology

1394 (also known as FireWire or i.LINK) is an international standard data transfer protocol created by Apple Computer, Inc. and ratified by the International Standards Organization as IEEE 1394. Like other data I/O protocols such as SCSI, Fibre Channel, and IDE, 1394 itself knows nothing about video, compression, or editing. It is a series of standardized commands for moving data from one device to another.

1394 offers advantages that make it ideal for use with audio and video devices:

- It's fast

It has 100/200/400 Mbps, or 12.5/25/50 MBps data transfer rates.

- It's guaranteed

Both isochronous (guaranteed bandwidth, ensuring full-frame, full motion video, and CD-quality audio) and asynchronous data transfers.

- It's consumer friendly

Small connectors, hot-pluggable (meaning you can connect and disconnect DV devices without rebooting a computer), and no need for terminators or setting device IDs.

- It's expandable

Supports up to 62 devices (16 daisy-chained) with a 4.5m flexible cable between devices over a total length of up to 72m or 240 feet.

# Troubleshooting

The following tips are general troubleshooting procedures:

- Check that the card is seated evenly all the way into the PCI slot.
- Check motherboard system documentation to ensure that bus mastering support is provided and enabled for the slot containing the AFW-4300.
- Check if the card is not detected by the operating system and/or the driver fails to load, to try moving the card to a different PCI slot.
- Check that the 1394 cable is properly connected between your AFW-4300 and the DV camcorder or other peripherals.
- Check the Windows 2000 Event Log if you encounter problems loading the drivers on your Windows 2000 operating system.
- Check the Troubleshooting section of your operating system user manual.
- Check the Software Tutorial or Read Me file on this CD if you encounter any problems with your software.
- For the Power Macintosh system, verify that the card is seen by the Apple System Profiler

To verify that the card is seen by the Apple System Profiler, follow these steps:

1. Pull down from the Apple Menu to Apple System Profiler.
2. Click the **Devices and Volumes** tab.

3. In the window that appears, scroll down to the **PCI** area and click the arrow next to each PCI slot to reveal the PCI card information. If the AFW-4300 is installed properly, you will see the following information listed under one of the slots:

Card type:	Not available
Card name:	pci104c,8010
Card model:	Not available
Card ROM #:	Not available
Card Revision:	0
Card vendor ID:	104C

4. If the card is not seen, verify the Apple FireWire 2.4 or later extensions are loaded and enabled.
5. If the extensions are loaded and enabled, verify that the card is seated properly.

If you are still unable to resolve a problem, see the Adaptec Web site at <http://www.adaptec.com>, or the Adaptec Support Knowledgebase at <http://ask.adaptec.com> for additional troubleshooting information.

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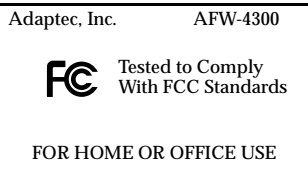
### Federal Communications Commission Radio Frequency Interference Statement

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. However, if this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.
- Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



### European Union Compliance Statement

This Information Technology Equipment has been tested and found to comply with the following European directives:

EMC Directive 89/336/EEC, as amended by 92/31/EEC and 93/68/EEC

EN 50081-1 (1992)

EN55022 (1994) Class B

EN 50082-1 (1992)

EN61000-4-2 (1998)

EN61000-4-3 (1998)

EN61000-4-4 (1995)

EN61000-4-5 (1995) Surges

EN61000-4-6 (1996) Conducted immunity

EN61000-4-11 (1994) Supply dips of variation



### Australian/New Zealand Compliance Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Spectrum Management Agency.



### **Canadian Compliance Statement**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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